



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4084D
 UNIQUE ID NUMBER: 10PW098
 COMBUSTOR: Floatwall
 ENGINE TYPE: TF

BYPASS RATIO: 6.2
 PRESSURE RATIO (π_{00}): 36.3
 RATED THRUST (F_{00}) (kN): 385.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	3.7	32.3	75.5	8.8
AS % OF ORIGINAL LIMIT	19.0	27.3	67.1	53.8
AS % OF CAEP/2 LIMIT (NO _x)			83.8	
AS % OF CAEP/4 LIMIT (NO _x)			94.9	
AS % OF CAEP/6 LIMIT (NO _x)			105.5	
AS % OF CAEP/8 LIMIT (NO _x)			120.4	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 - DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	3.557	0.02	0.28	51.39	7.5
CLIMB OUT	85	2.2	2.809	0.02	0.32	37.78	3.4
APPROACH	30	4.0	0.954	0.04	0.66	12.27	0.7
IDLE	7	26.0	0.322	2.16	21.12	3.99	0.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1251	1102	10923	26498	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				2.9	28.3	68.7	7.5
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)							

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.1-102.5
TEMPERATURE (K)	275.5-302.5
ABS HUMIDITY (kg/kg)	0.0033-0.0112

FUEL

SPEC	Jet A
H/C	1.85-1.92
AROM (%)	17

MANUFACTURER: Pratt & Whitney
 TEST ORGANIZATION: Pratt & Whitney
 TEST LOCATION: Middletown, CT
 TEST DATES: 13/04/2010-13/04/2010

NO_x REGULATION PARAGRAPH

x	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

REMARKS

- Data updated to reflect additional engine test as well as updated engine performance.
- Additional engine tested to show CAEP/4 compliance.
- Certification in accordance with Part III, Chapter 2, of Amendment 4 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 c) (CAEP/4)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)